INSTRUMENTS

INDUSTRIAL—SCIENTIFIC

Volume One

1928

Managing Editor

Richard Rimbach

Associate Editors

L. E. Barbrow
W. A. Copeland
M. Hartenheim
Carl W. Kuettner
D. L. Mathias
M. Berg Rimbach

Abstract Editors

M. E. Haas
L. A. Meisse
Arthur Schroder
H. Semrau
A. J. Strod
A. M. Wahl

Advisory Abstract Editors

Wm. B. Gamble
Technology Librarian,
New York Public Library

F. H. McClelland
Technology Librarian,
Carnegie Library

Collaborators

Prof. F. C. Ashe
Dr. James Aston
R. V. Baud
Dr. G. Berndt
Dr. F. L. Bishop
Prof. Wm. G. Brown
Prof. K. J. de Juhasz
R. L. Dunlap
Owen W. Ellis
Dr. Waldemar Ewald
Paul B. Findley
A. A. Grubb
Prof. J. B. Grumbein
Robert G. Guthrie
Prof. Lester Hamilton
Dr. John L. Haughton
H. L. Hazeltine
John L. Hodgson
Prof. George Hosmer
Prof. J. W. Howard
Prof. Hans von Jueptner
Dr. Friedrich Koerber
Dr. V. M. Krivibok
A. A. Lebedeff
John M. Lessells
E. S. Lincoln
Richard R. Moore
Dr. Allen Leslie Norbury
Prof. P. H. Schweitzer
Dr. Harry Seltz
Dr. Foster D. Snell
Thomas Spooner
Francis M. Turner, Jr.
Prof. J. W. Tynan, S. J.
Dr. S. R. Williams
Prof. W. R. Work
C. B. Wright

Published the 15th of each month by

INSTRUMENTS PUBLISHING COMPANY

1117 WOLFENDALE STREET, PITTSBURGH, PA.

VOLUME ONE

January to December, 1928

	PAGES
January	1–76
February	77–126
March	127–166
April	167–212
May	213–258
June	259–300
July	301–342
August	343–384
September	385–428
October	429–464
November	465–498
December	499–540

SUBJECT INDEX

A

A.C. and D.C. Tube Tester, New Hoyt Universal ... 247
A.C. Voltmeters, Hoyt, Pocket ... 195
Accelerometer, Cambridge Recording ... 61
Acid-Alkalimeter, Palo ... 417
Acoustical Strain Gauge ... 251
Aircraft Instruments, Why Not Build ... 175
Aircraft Recorder, Hasler Tel. ... 253
Air Flow Indicator, Research ... 527
Apparatus for Working With the Exclusion of Air Or In a Neutral Atmosphere ... 311

B

Balance, Multiweight ... 378
Bausch, John Jacob—Instrument Pioneers ... 389
Bending Strength and Bending Angle of Boards, New Instrument for Testing the ... 291
Blackness Meter for Paper ... 287
Blending Calculator, Tag-Isom ... 64
Boiler Furnaces, Measurement of Temperature ... 351
Boiler Panel, New Hays ... 531
Brady B.T.U. Indicator, The New Improved Type of ... 105
Brake Testing and Performance Meters, Tapley ... 201
Bridge, Sugar Ash ... 295
Brinell Hardness Testing Machine, Precision ... 461
Brinell Miscroscope, A New ... 457
Brittleness of Rubber and Gutta Percha Compounds, A Device for Measuring the ... 275
B.T.U. Indicator, New Improved Type ... 105
Burette Fuel System, Research Twin ... 529

C

Calculagraph ... 409
Calculator, New ... 294
Calculator, Tag-Isom Blending ... 64
Caliper, Stainless Pocket ... 524
Care of Electrical Instruments ... 475
Catalytic Hydrogenation Apparatus ... 537
Chemical Miscroscope, Universal ... 377
Circular Dividing Machine ... 453
Combustion Compass ... 203
Combustion Meter, New ... 531
Comparison of the Various Methods of Testing the Hardness of Metals ... 87
Compression Test Machine, Fisher ... 63
Controller, American Precision ... 289
Controller, Tag Steam Operated ... 119
Controlling Instrument, A New Combination Recording ... 243
Cycle, Contactor, Time ... 485

D

Darwin, Sir Horace—Instrument Pioneers ... 469
D.C. & A.C. Tube Tester, Hoyt Universal ... 247
Demand Totalizing By the Impulse Method ... 237
Design of Instrument Transformers ... 359
Determination of Flashpoint of Varnishes, Paints, Etc. ... 471
Dilatometer With Panel Built, Rockwell ... 13
Dividers, A Convenient Indicating Device for Calipers and Compasses ... 165
Dividing Machine, Circular ... 453
Dividing Machine, Linear ... 425
Draft and Pressure Indicator, Portable ... 416
Duo Stat, The Raymond ... 297
Durac—An Improved Hydrometer ... 383

E

Electric Meter History ... 151
Electrical Instruments, The Care of ... 475
Electrical Insulation, Instruments for the Measurement of ... 93
Electrical Standards ... 233
Emley Plasticimeter ... 60
Engine Indicator, A New ... 405
Engine Indicator, New High Speed ... 179

F

Flashpoint of Varnished, Paints, etc., The Determination of ... 471
Flow Indicator, Research Fuel ... 528
Flow Indicator, Research Air ... 527
Flow Meter, Meriam Indicating ... 459
Flow Meter M.J.L. Indicating ... 533
Flow Meter, Steam ... 535
Frequency Meter ... 450
Fuel Flow Indicator, Research ... 528
Fuel System, Research Twin ... 529

G

Galileo Galilei—Instrument Pioneers ... 171
Galvanometer, Microid Adaptable ... 455
Gardner Mobilometer ... 339
Gas Analysis by the Simultaneous Oxydation of Methane, Carbon Monoxide and Hydrogen ... 55
Gas Balance, New Precision Specific Gravity ... 255
Gas Leak Indicator, "Cajo" ... 447
Gauges, Krupp Mikrotast ... 421
Geodetic Level Rod—Its Design and Methods of Construction, The ... 347
Ground Speed Indicator, Indicating and Integrating ... 327
Ground Testing ... 317

H

Hardness of Metals, Comparisom of the Various Methods of Testing the ... 87
Hardness Tester, Model 3-H, Rockwell ... 199
Hardness Tester, Scratch ... 329
Hardness Testing Machine ... 335
Hardness Testing Machine, New Precision Brinell Type ... 461
High Speed Engine Indicator, A New ... 179
History, Alessandro Volta ... 83
History, Electric Meter ... 151
History, Galileo Galilei ... 171
History, Georg Simon Ohm ... 503
History, John Jacob Bausch and Captain Henry Lomb ... 389
History, Morris M. Tillerington ... 433
History, Oliver Blackburn Schallenberger ... 131
History, Sir Horace Darwin ... 469
History, William Thomson (Lord Kelvin) ... 219
Humidity Test Equipment ... 135
Hydrogenation Apparatus, Catalytic ... 537
Hydrometer, Durac-Av Improved ... 383

I

Indicating and Integrating Ground Speed Indicator ... 327
Indicator, Research Air Flow ... 527
Indicator, Research Fuel Flow ... 528
Instruments for the Measurement of Electrical Insulation ... 93
Instruments for the Solution of Triangles and Other Polygons ... 355
Instrument Pioneers—Alessandro Volta ... 83

PAGES

Instrument Pioneers—Galileo Galilei . . 171
Instrument Pioneers—Georg Simon Ohm . 503
Instrument Pioneers—John Jacob Bausch and Captain Henry Lomb 389
Instrument Pioneers—Morris M. Titterington 433
Instrument Pioneers—Oliver Blackburn Shallenberger 131
Instrument Pioneers—Sir Horace Darwin . 469
Instrument Transformers, Design of . . . 359
Instrument Pioneers—William Thomson . . 219
Integration of Diagrams for Which the Movement of the Pen is Proportional to The "Orifice Head" By Means of Ordinary "Area-Measuring" or "Radial" Planimeters 479

K

Kelvin—William Thomson—Instrument Pioneer 219
Kiser Polarization Luster Meter 287

L

Level Rod, Geodetic 347
Lindberg Got Across, How 223
Linear Dividing Machine 425
Lomb, Captain Henry—Instrument Pioneers 389
Luster Meter, Kiser Polarization 287
Luster, The Measurement of 111

M

Magnetic Methods Employed in Studying the Mechanical Properties of Matter, A Resume of the 29
Measurement of Electrical Insulation, Instruments for the 141
Measuring Machine, A Two-Co-Ordinate . 419
Measuring Machine, Carl Zeiss Precision . 483
Measuring Surfaces of Measuring Tools, Determination of the Parallelism of the . 263
Measuring the Brittleness of Rubber and Gutta Percha Compounds, A Device for . 275
Measuring to Four Parts in a Billion . . . 99
Measuring Tools, New 380
Mechanical Properties of Matter, Resume of the Magnetic Methods Employed . . . 29
Megohmer, The Standco Model "DM" . . . 445
Microammeter, Semi-Suspended 249
Micrometer, Neumann 341
Micrometers—New Measuring Tools 380
Microscope, A New Brinell 457
Microscope In Industry, The Use of the . . 5
Misroscope, Universal Chemical 377
Mikrotast Gauges, Krupp 421
Mobiometer, Gardner 339
Multiweight Balance 378

N

Neumann Micromanometer 341

O

Offset Receiver 121
Ohm, Georg Simon—Instrument Pioneers . 503
Oil Specifications of The American Oil Burner Association, Uniform Fuel Oil . . 189
Open Scale Recorder 59
Optimeter, New Zeiss Projection 257
Orsat—"The Combustion Compass" 203
Oscillograph, Type 338 String 491

P

Parallelism of the Measuring Surfaces of Measuring Tools 263
Pathological Microscope, Beck 451
Performance Meters, Tapley Broke Testing and 201
Permeameter, A Direct-Reading 507
Phase Sequence Indicator, Standco 379
Photo-Elastic Experiments, Simple Arrangement for 305
Photo-Elastic Work, Description of a Polarized Light Apparatus for 393
Photometer for Measuring Colored Light, Portable 51
Planimeters, Integration of Diagrams for Which the Movement of the Pen is Proportional to the "Orifice Head" by Means of Ordinary "Area-Measuring" or "Radial" 479
Plasticimeter, Emley 60
Polarization Luster Meter, Kiser 287

PAGES

Polarized Light Apparatus for Photo-Elastic Work, Description of 393
Pressure and Draft Indicator, Portable . . 416
Pressure Gaging Instrument, New 381
Projection Optimeter, New Zeiss 257
Psychrostat, The Parkspray 413
Pyrometer, The Radiation 443

R

Radiation Pyrometer 443
Radiation Pyrometer, K-& S Pocket 333
Recorder for Aircraft, Hasler Tel. 253
Recorder, Hasler Tel Vehicle 337
Recorder, Improved V-Notch Weir Recorder 187
Recorder, Open Scale 59
Recording and Controlling Instrument, A New Combination 243
Recording Instruments of New Design, Strip Chart 486
Recording Thermometer for Milk Plants . . 525
Recording Thermometers Self-Contained Type, Tag Portable 197
Rockwell Hardness Tester, Model 3-H . . . 199

S

Sand Tests—What Do They Mean? 39
Scientific Instruments Play in Our Lives, The Part 187
Scratch Hardness Tester 329
Seismic Station at Fordham, The New . . . 229
Sequence Indicator, Standco Phase 379
Service Set Tester, Model 500, Universal . 293
Shallenberger, Oliver Blackburn—Instrument Pioneers 131
Solution of Triangles and Other Polygons, Instruments for the 355
Specifications for Raw Materials, New . . 519
Specifications of The American Oil Burner Association Uniform Fuel Oil 189
Specific Gravity Gas Balance, A New Precision 255
Specific Gravity of Varnishes, Paints, Etc., Measurement of 515
Specific Gravity, Surface Moisture and Voids in the Fine Aggregate for Use in Concrete Mixtures, Determination of . . 147
Spectrum Analyzer, A Proposed Automatic 281
Speed Indicators and Tachometers 331
Standards, Electrical 233
Steam Flow Meter 535
Steam Meter, "Turbine" 435
Steam Operated Controller, Tag 119
Strain Gauge Levers, Eliminating Error With Spherical Points on 283
Strain Gauge, New Maihak Acoustical . . . 251
Strain Gage, Whittemore 209
Strength Tester for Knit Goods 523
Strength—Tests of Telephone Materials . . 313
String Oscillograph, Type 338 491
Stroborama 205
Stroboscope, (Stroborama) 205
Sugar Ash Bridge 295
Surface Moisture and Voids in the Fine Aggregate for Use in Concrete Mixtures, Determination of Specific Gravity 147
The Synchronometer 123

T

Tachometer, Model 1927, Hammer-Fennel 117
Tachometer, Model 1927, The Hammer-Fennel 211
Tachometer 415
Tachometer, Newspaper 449
Tag-Isom Blending Calculator 64
Tachometers and Speed Indicators 331
Temperatire Controller, American Precision 289
Temperatures in Boiler Furnaces, Measurement of 351
Temperature, The Measurement of 439
Tensile Strength Tester, Improved Motor Driven 209
Test Machine, Fisher Compression 63
Tests of Telephone Materials, Strength . . 313
Tests on Round and Square Bars of Grey Cast Iron, Transverse 401
Tester for Knit Goods, New Strength . . . 523
Testing Machine, Hardness 335

JUN 29 192